

Fig. 1A

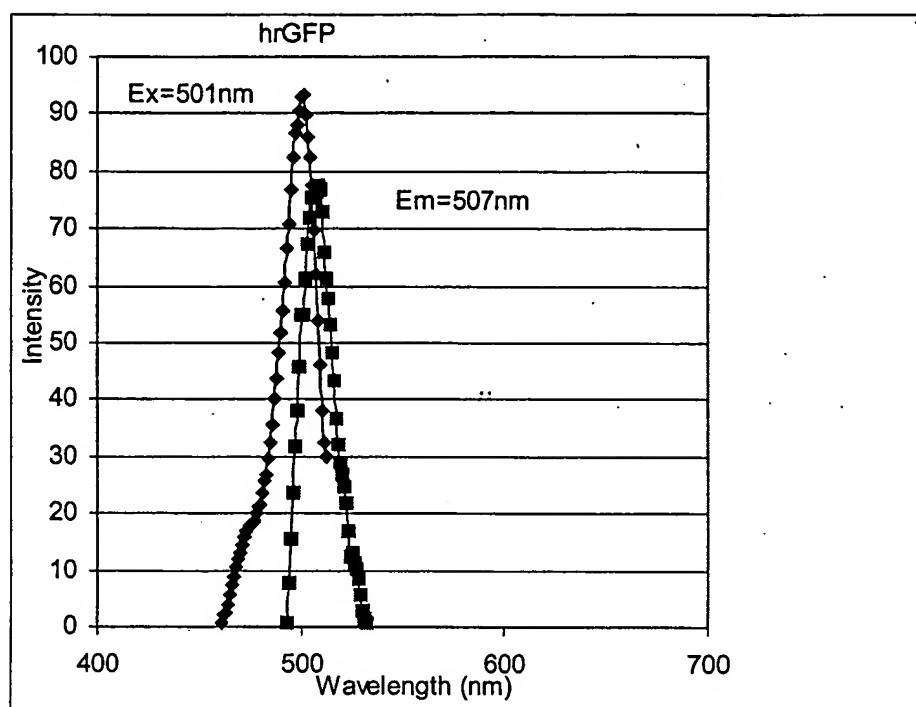


Fig. 1B

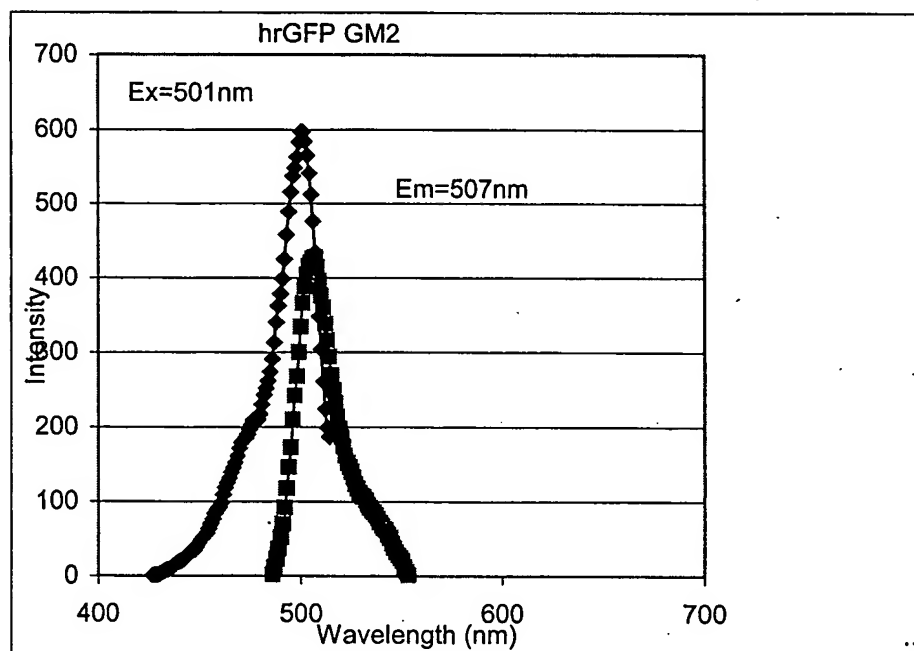


Fig. 1C

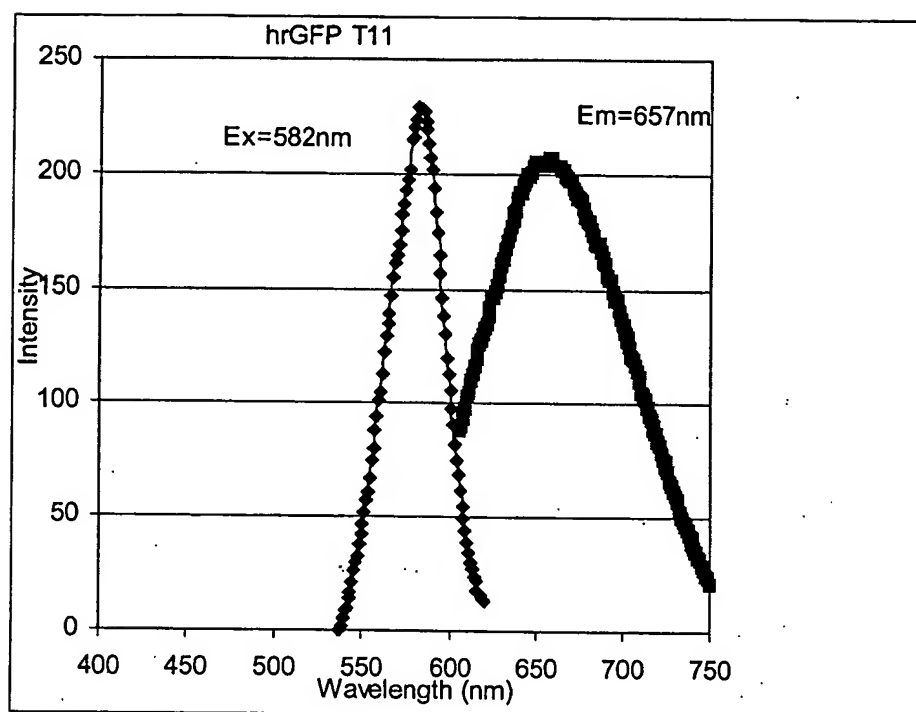


Fig. 1D

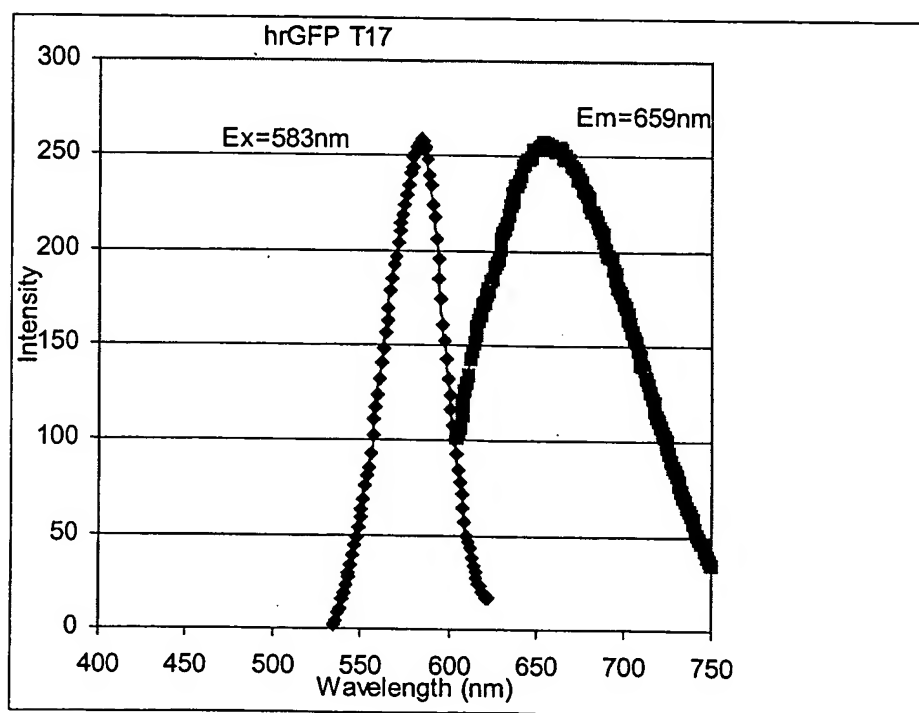


Figure 2. Expression of hrGFP wild-type or hrGFP GM2 Mutant in CHO Cells

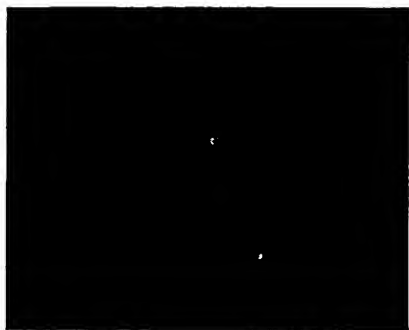


Fig. 2A

hrGFP wild-type



Fig. 2B

hrGFP GM2

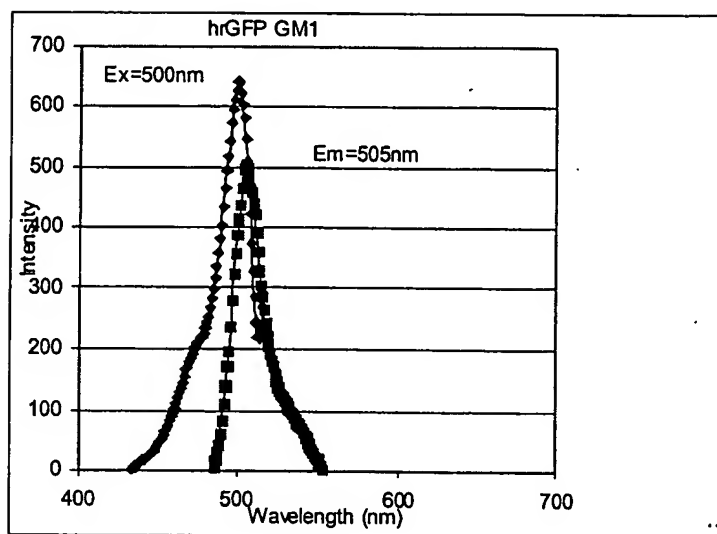


Fig. 3A

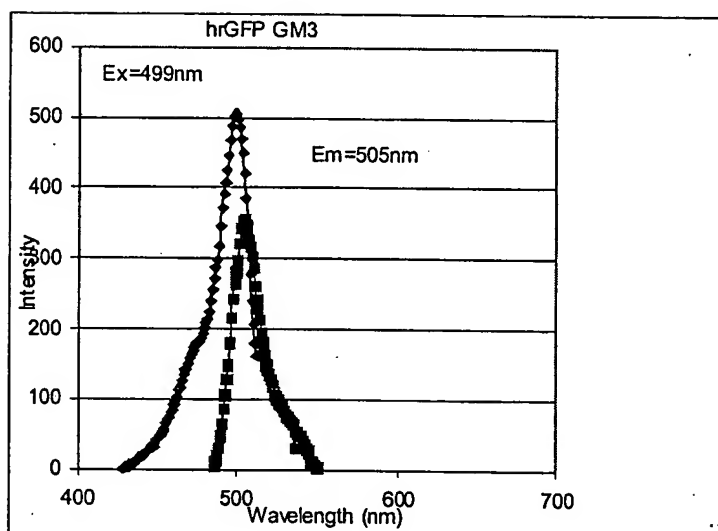


Fig. 3B

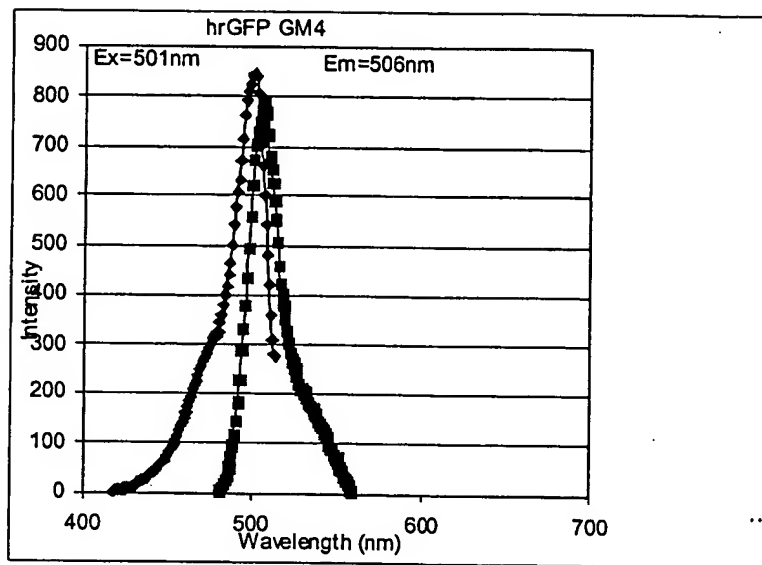


Fig. 3C

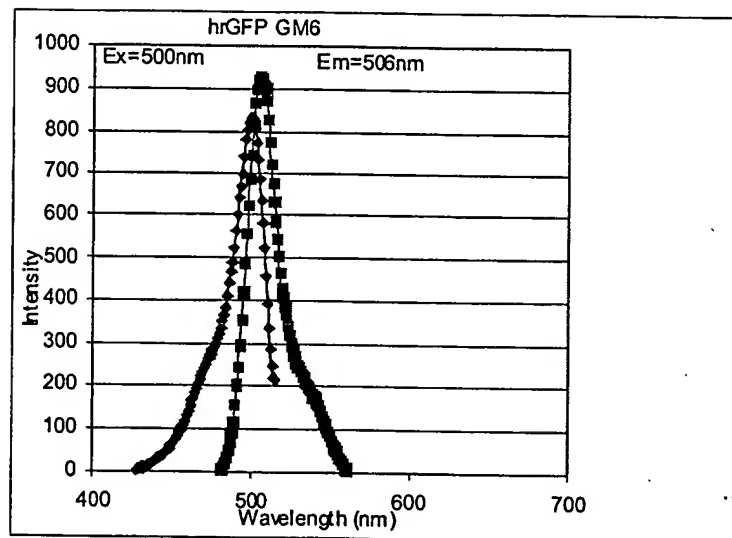


Fig. 3D

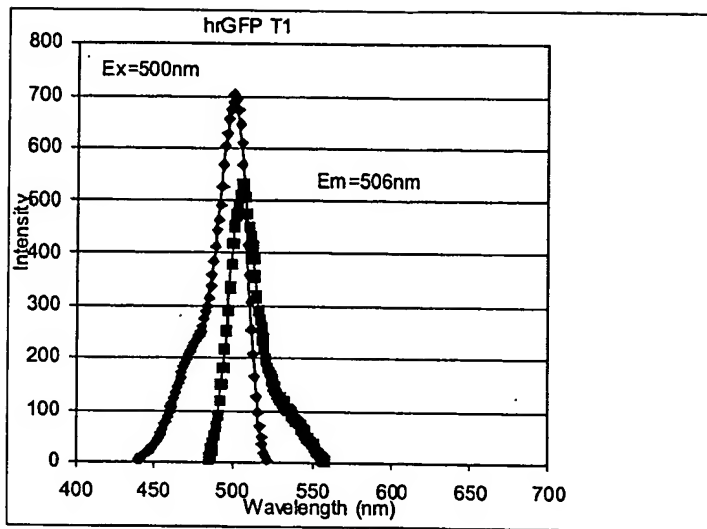


Fig. 3E

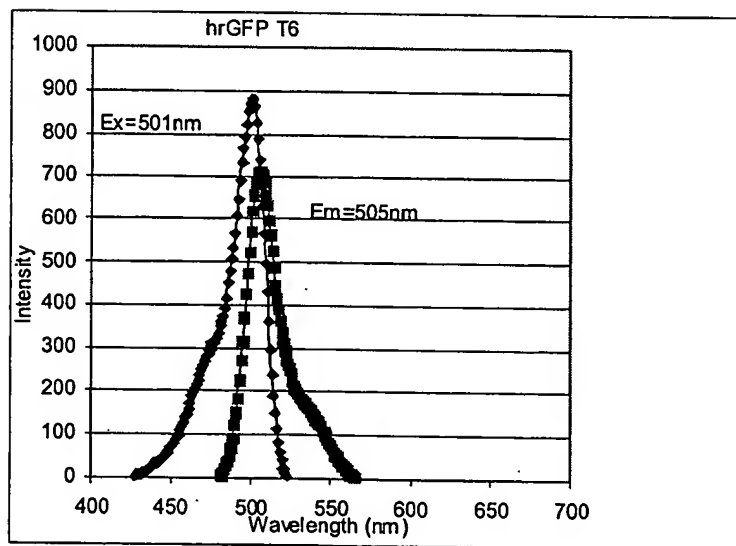


Fig. 3F

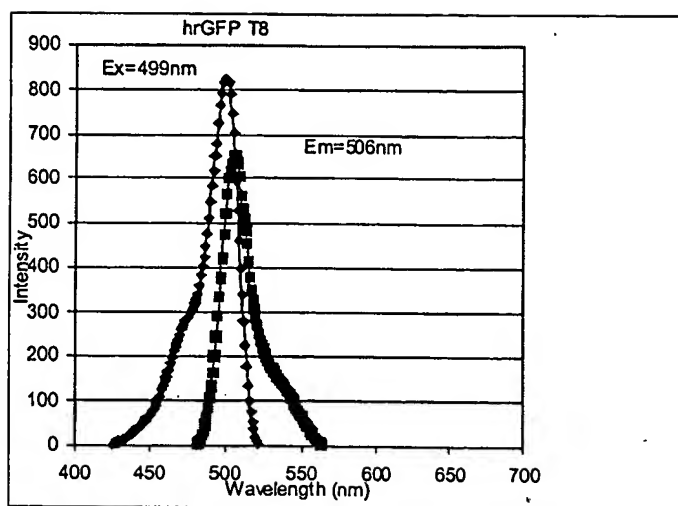


Fig. 3G

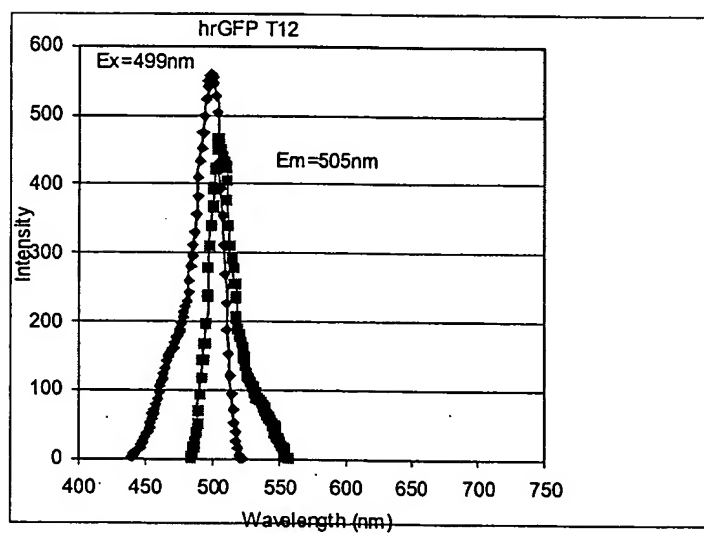


Fig. 3H

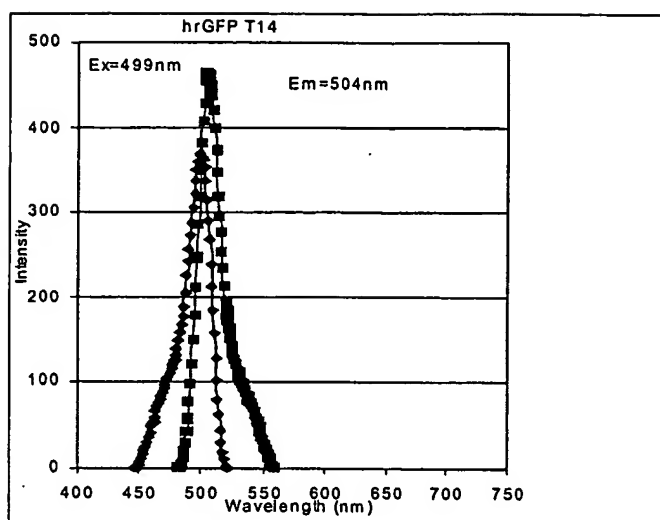


Fig. 3 I

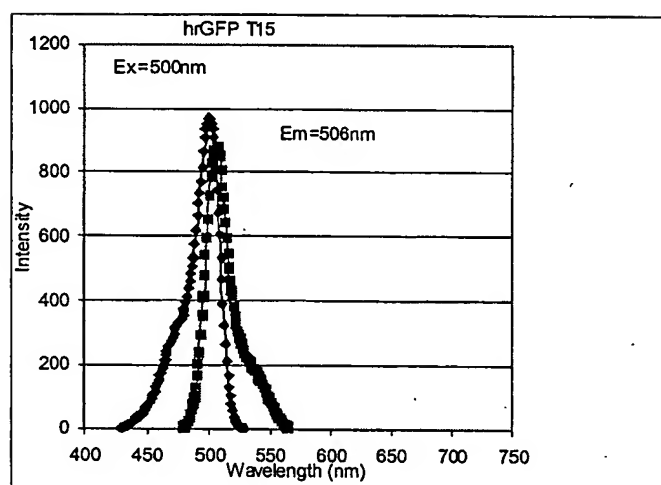


Fig. 3J

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25					30				
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
	35					40					45					
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
			85					90					95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105				110				
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120				125					
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200				205					
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215				220						
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:1	
225					230				235						SEQ ID NO:2	

Fig. 4

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25					30				
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	tta	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Leu	Gly	Asn	Gln	Leu	Val	
	35					40					45					
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90					95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105				110				
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
	115					120					125					
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
				165				170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185				190				
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
	195					200					205					
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215				220						
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:3	
225					230				235						SEQ ID NO:4	

Fig. 5

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90					95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105				110				
agc	gac	atc	aac	ctg	atc	gag	ggg	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Gly	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150				155					160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
				165				170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200				205					
gtg	gag	gac	ggc	ggc	ttc	gta	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215				220						
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:5	
225					230				235						SEQ ID NO:6	

Fig. 6

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	ggc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85					90					95		
tac	gag	cgc	acc	atg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Met	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
	145				150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:7	
225					230				235						SEQ ID NO:8	

Fig. 7

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	aac	aac	cac	gtg	ttc	acc		96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25				30					
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	tcc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Ser	Gly	Asn	Gln	Leu	Val	
	35			40			45									
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50			55			60									
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65				70			75							80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
			85				90						95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
		100					105				110					
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
	115						120				125					
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130			135					140							
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145				150			155							160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165				170						175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
		180					185						190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
	195						200				205					
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210			215						220						
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:9	
225				230					235						SEQ ID NO:10	

Fig. 8

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25					30				
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
	35			40			45									
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50			55			60									
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65				70			75							80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
		85					90						95			
tac	gag	cgc	acc	ctg	ctc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Cys	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
		100					105					110				
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cac	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	His	Val	Glu	Tyr	
	115			120			125									
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130			135			140									
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145			150				155						160			
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
		165					170						175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
		180					185						190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
	195			200			205									
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210			215			220									
ctg	acc	agc	ctg	ggc	aat	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Tyr	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:11	
225				230			235								SEQ ID NO:12	

Fig. 9

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	atc	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Ile	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90						95		
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	ggg	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Gly	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aac	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Asn	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170						175		
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:13	
225					230					235					SEQ ID NO:14	

Fig. 10

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90						95		
tac	gag	cgc	acc	ctg	cgc	ttc	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Phe	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
				165				170						175		
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:15	
225					230				235						SEQ ID NO:16	

Fig. 11

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	ccc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Pro	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90						95		
tac	gag	cgc	acc	ctg	cgc	ttc	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Phe	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
				165				170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:17	
225					230					235					SEQ ID NO:18	

Fig. 12

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25					30				
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
	35					40					45					
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	ggc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75				80			
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
			85					90					95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	ggg	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Gly	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
	145				150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:19	
225					230				235						SEQ ID NO:20	

Fig. 13

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	tcc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Ser	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
			85					90					95			
tac	gag	cgc	acc	ctg	cgc	ttc	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Phe	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105				110				
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	gag	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Glu	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145				150					155					160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200				205					
gtg	gag	gac	ggc	ggc	ttc	gta	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215				220						
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:21	
225					230				235						SEQ ID NO:22	

Fig. 14

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	tcc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Ser	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85					90					95		
tac	gag	cgc	acc	ctg	cgc	ttc	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Phe	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	gag	atg	ttc	ggg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Glu	Met	Phe	Glu	Tyr	Arg	Val	Glu	Tyr	
		115						120				125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aag	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Lys	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:23	
225					230				235						SEQ ID NO:24	

Fig. 15

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1				5					10					15		
agc	ttc	aag	gtg	atc	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Ile	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
			20					25					30			
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
		35					40					45				
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55					60					
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70				75					80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85					90					95		
tac	gag	cgc	acc	ctg	cgc	ttc	gag	gac	ggc	ggc	ctg	gtg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Phe	Glu	Asp	Gly	Gly	Leu	Val	Glu	Ile	Arg	
			100					105					110			
agc	gac	atc	aac	ctg	atc	gag	ggg	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Gly	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
		115					120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aat	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Asn	Thr	Ile	
	130					135					140					
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170						175		
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	gcc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Ala	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	atc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Ile	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:25	
225					230				235						SEQ ID NO:26	

Fig. 16

atg	gtg	agc	aag	cag	atc	ctg	aag	aac	acc	ggc	ctg	cag	gag	atc	atg	48
Met	Val	Ser	Lys	Gln	Ile	Leu	Lys	Asn	Thr	Gly	Leu	Gln	Glu	Ile	Met	
1			5					10					15			
agc	ttc	aag	gtg	aac	ctg	gag	ggc	gtg	gtg	aac	aac	cac	gtg	ttc	acc	96
Ser	Phe	Lys	Val	Asn	Leu	Glu	Gly	Val	Val	Asn	Asn	His	Val	Phe	Thr	
		20					25					30				
atg	gag	ggc	tgc	ggc	aag	ggc	aac	atc	ctg	ttc	ggc	aac	cag	ctg	gtg	144
Met	Glu	Gly	Cys	Gly	Lys	Gly	Asn	Ile	Leu	Phe	Gly	Asn	Gln	Leu	Val	
	35					40				45						
cag	atc	cgc	gtg	acc	aag	ggc	gcc	ccc	ctg	ccc	ttc	gcc	ttc	gac	atc	192
Gln	Ile	Arg	Val	Thr	Lys	Gly	Ala	Pro	Leu	Pro	Phe	Ala	Phe	Asp	Ile	
	50					55				60						
ctg	agc	ccc	gcc	ttc	cag	tac	ggc	aac	cgc	acc	ttc	acc	aag	tac	ccc	240
Leu	Ser	Pro	Ala	Phe	Gln	Tyr	Gly	Asn	Arg	Thr	Phe	Thr	Lys	Tyr	Pro	
65					70			75						80		
gag	gac	atc	agc	gac	ttc	ttc	atc	cag	agc	ttc	ccc	gcc	ggc	ttc	gtg	288
Glu	Asp	Ile	Ser	Asp	Phe	Phe	Ile	Gln	Ser	Phe	Pro	Ala	Gly	Phe	Val	
				85				90					95			
tac	gag	cgc	acc	ctg	cgc	tac	gag	gac	ggc	ggc	ctg	gcg	gag	atc	cgc	336
Tyr	Glu	Arg	Thr	Leu	Arg	Tyr	Glu	Asp	Gly	Gly	Leu	Ala	Glu	Ile	Arg	
			100					105				110				
agc	gac	atc	aac	ctg	atc	gag	ggg	atg	ttc	gtg	tac	cgc	gtg	gag	tac	384
Ser	Asp	Ile	Asn	Leu	Ile	Glu	Gly	Met	Phe	Val	Tyr	Arg	Val	Glu	Tyr	
	115						120					125				
aag	ggc	cgc	aac	ttc	ccc	aac	gac	ggc	ccc	gtg	atg	aag	aat	acc	atc	432
Lys	Gly	Arg	Asn	Phe	Pro	Asn	Asp	Gly	Pro	Val	Met	Lys	Asn	Thr	Ile	
	130					135				140						
acc	ggc	ctg	cag	ccc	agc	ttc	gag	gtg	gtg	tac	atg	aac	gac	ggc	gtg	480
Thr	Gly	Leu	Gln	Pro	Ser	Phe	Glu	Val	Val	Tyr	Met	Asn	Asp	Gly	Val	
145					150					155				160		
ctg	gtg	ggc	cag	gtg	atc	ctg	gtg	tac	cgc	ctg	aac	agc	ggc	aag	ttc	528
Leu	Val	Gly	Gln	Val	Ile	Leu	Val	Tyr	Arg	Leu	Asn	Ser	Gly	Lys	Phe	
			165					170					175			
tac	agc	tgc	cac	atg	cgc	acc	ctg	atg	aag	agc	aag	ggc	gtg	gtg	aag	576
Tyr	Ser	Cys	His	Met	Arg	Thr	Leu	Met	Lys	Ser	Lys	Gly	Val	Val	Lys	
			180					185					190			
gac	ttc	ccc	gag	tac	cac	ttc	atc	cag	cac	cgc	ctg	gag	aag	acc	tac	624
Asp	Phe	Pro	Glu	Tyr	His	Phe	Ile	Gln	His	Arg	Leu	Glu	Lys	Thr	Tyr	
		195					200					205				
gtg	gag	gac	ggc	ggc	ttc	gtg	gag	cag	cac	gag	acc	gcc	atc	gcc	cag	672
Val	Glu	Asp	Gly	Gly	Phe	Val	Glu	Gln	His	Glu	Thr	Ala	Ile	Ala	Gln	
	210					215					220					
ctg	acc	agc	ctg	ggc	aag	ccc	ctg	ggc	agc	ctg	cac	gag	tgg	gtg	taa	720
Leu	Thr	Ser	Leu	Gly	Lys	Pro	Leu	Gly	Ser	Leu	His	Glu	Trp	Val	SEQ ID NO:27	
225					230					235					SEQ ID NO:28	

Fig. 17

atg gtg agc aag cag atc ctg aag aac acc ggc ctg cag gag atc gtg	48
Met Val Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Val	
1 5 10 15	
agc ttc aag gtg atc ctg gag ggc gtg aac aac cac gtg ttc acc	96
Ser Phe Lys Val Ile Leu Glu Gly Val Val Asn Asn His Val Phe Thr	
20 25 30	
atg gag ggc tgc ggc aag ggc aac atc ctg ttc ggc aac cag ctg gtg	144
Met Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val	
35 40 45	
cag atc cgc gtg acc aag ggc gcc ccc ctg ccc ttc gcc ttc gac atc	192
Gln Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile	
50 55 60	
ctg agc ccc gcc ttc cag tac ggc aac cgc acc ttc acc aag tac ccc	240
Leu Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro	
65 70 75 80	
gag gac atc agc gac ttc ttc atc cag agc ttc ccc gcc ggc ttc gtg	288
Glu Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val	
85 90 95	
tac gag cgc acc ctg cgc tac gag gac ggc ggc ctg gtg gag atc cgc	336
Tyr Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg	
100 105 110	
agc gac atc aac ctg atc gag ggg atg ttc gtg tac cgc gtg gag tac	384
Ser Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr	
115 120 125	
aag ggc cgc aac ttc ccc aac gac ggc ccc gtg atg aag aat acc atc	432
Lys Gly Arg Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile	
130 135 140	
acc ggc ctg cag ccc agc ttc gag gtg gtg tac atg aac gac ggc gtg	480
Thr Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val	
145 150 155 160	
ctg gtg ggc cag gtg atc ctg gtg tac cgc ctg aac tgc ggc aag ttc	528
Leu Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Cys Gly Lys Phe	
165 170 175	
tac agc tgc cac atg cgc acc ctg atg aag agc aag ggc gtg gtg aag	576
Tyr Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys	
180 185 190	
gac ttc ccc gag tac cac ttc atc cag cac cgc ctg gag aag acc tac	624
Asp Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr	
195 200 205	
gtg gag gac ggc ggc ttc gtg gag cag cac gag acc gcc atc gcc cag	672
Val Glu Asp Gly Gly Phe Val Glu Gln His Glu Thr Ala Ile Ala Gln	
210 215 220	
ctg acc agc ctg ggc aag ccc ctg ggc agc ctg cac gag tgg gtg taa	720
Leu Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:29	
SEQ ID NO:30	

Fig. 18

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:31	
SEQ ID NO:32	

Fig. 19

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta tta gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Leu Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
ggt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	

SEQ ID NO:33
SEQ ID NO:34

Fig. 20

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
ggt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gta gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:35	
SEQ ID NO:36	

Fig. 21

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg atg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Met Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
ggt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	

SEQ ID NO:37
SEQ ID NO:38

Fig. 22

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta tcc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Ser Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:39	
SEQ ID NO:40	

Fig. 23

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg tgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Cys Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac cat gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr His Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
ggt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aat cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Tyr Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:41	
SEQ ID NO:42	

Fig. 24

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg att ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Ile Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aat aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:43	
SEQ ID NO:44	

Fig. 25

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt ttc gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:45	
SEQ ID NO:46	

Fig. 26

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc cca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Pro Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt ttc gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggt agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
ggt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
	SEQ ID NO:47
	SEQ ID NO:48

Fig. 27

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:49	
SEQ ID NO:50	

Fig. 28

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta tcc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Ser Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt ttc gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gag tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Glu Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gta gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
	SEQ ID NO:51
	SEQ ID NO:52

Fig. 29

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta tcc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Ser Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt ttc gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gag tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Glu Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:53	
SEQ ID NO:54	

Fig. 30

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg att ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Ile Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt ttc gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Phe Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aat aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag gcg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Ala Tyr Val	
195 200 205	
gaa gac gga ggt att gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Ile Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:55	
SEQ ID NO:56	

Fig. 31

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gct gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Ala Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aat aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:57	
SEQ ID NO:58	

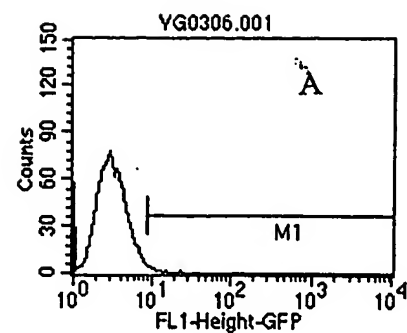
Fig. 32

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc gtg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Val Ser	
1 5 10 15	
ttt aaa gtg att ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Ile Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gct ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga acg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Thr Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag ggg atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Gly Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aat aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Asn Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tgt ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Cys Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
	SEQ ID NO:59
	SEQ ID NO:60

Fig. 33

atg agt aaa caa ata ttg aag aac act gga ttg cag gag atc atg tcg	48
Met Ser Lys Gln Ile Leu Lys Asn Thr Gly Leu Gln Glu Ile Met Ser	
1 5 10 15	
ttt aaa gtg aat ctg gaa ggt gta gta aac aat cat gtg ttc aca atg	96
Phe Lys Val Asn Leu Glu Gly Val Val Asn Asn His Val Phe Thr Met	
20 25 30	
gaa ggt tgt gga aaa gga aat att tta ttc gga aac caa ctg gtt cag	144
Glu Gly Cys Gly Lys Gly Asn Ile Leu Phe Gly Asn Gln Leu Val Gln	
35 40 45	
att cgt gtc aca aaa ggg gct ccg ctt cca ttt gca ttt gat att ctc	192
Ile Arg Val Thr Lys Gly Ala Pro Leu Pro Phe Ala Phe Asp Ile Leu	
50 55 60	
tca cca gcc ttc caa tac ggc aac cgt aca ttc acg aaa tac ccg gag	240
Ser Pro Ala Phe Gln Tyr Gly Asn Arg Thr Phe Thr Lys Tyr Pro Glu	
65 70 75 80	
gat ata tca gac ttt ttt ata caa tca ttt cca gcg gga ttt gta tac	288
Asp Ile Ser Asp Phe Phe Ile Gln Ser Phe Pro Ala Gly Phe Val Tyr	
85 90 95	
gaa aga gcg ttg cgt tac gaa gat ggt gga ctg gtt gaa atc cgt tca	336
Glu Arg Ala Leu Arg Tyr Glu Asp Gly Gly Leu Val Glu Ile Arg Ser	
100 105 110	
gat ata aat tta atc gag gag atg ttt gtc tac aga gtg gaa tat aaa	384
Asp Ile Asn Leu Ile Glu Glu Met Phe Val Tyr Arg Val Glu Tyr Lys	
115 120 125	
ggg agt aac ttc ccg aat gat ggt cca gtg atg aag aag aca atc aca	432
Gly Ser Asn Phe Pro Asn Asp Gly Pro Val Met Lys Lys Thr Ile Thr	
130 135 140	
gga tta caa cct tcg ttc gaa gtt gtg tat atg aac gat ggc gtc ttg	480
Gly Leu Gln Pro Ser Phe Glu Val Val Tyr Met Asn Asp Gly Val Leu	
145 150 155 160	
gtt ggc caa gtc att ctt gtt tat aga tta aac tct ggc aaa ttt tat	528
Val Gly Gln Val Ile Leu Val Tyr Arg Leu Asn Ser Gly Lys Phe Tyr	
165 170 175	
tcg tgt cac atg aga aca ctg atg aaa tca aag ggt gta gtg aag gat	576
Ser Cys His Met Arg Thr Leu Met Lys Ser Lys Gly Val Val Lys Asp	
180 185 190	
ttt ccc gaa tac cat ttc att caa cat cgt tta gag aag acg tat gtg	624
Phe Pro Glu Tyr His Phe Ile Gln His Arg Leu Glu Lys Thr Tyr Val	
195 200 205	
gaa gac gga ggt ttt gtt gag gaa cac gag acg gcc att gct caa ctg	672
Glu Asp Gly Gly Phe Val Glu Glu His Glu Thr Ala Ile Ala Gln Leu	
210 215 220	
aca tcg ctg ggg aaa cca ctt gga tcc tta cac gaa tgg gtt	714
Thr Ser Leu Gly Lys Pro Leu Gly Ser Leu His Glu Trp Val	
225 230 235	
SEQ ID NO:61	
SEQ ID NO:62	

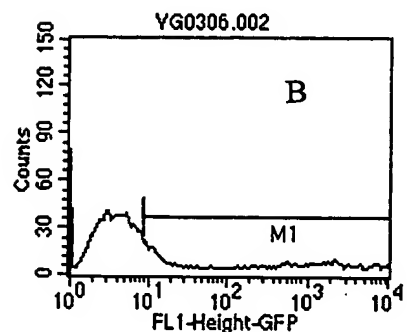
Fig. 34



File: VG0306.001
Gate: No Gate
Total Events: 7580

Acquisition Date: 06-Mar-03
Gated Events: 7580
X Parameter: FL1-H FL1-Height-GFP (Log)

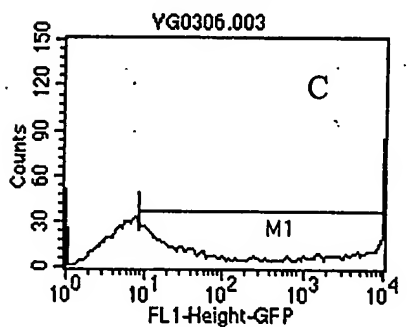
Marker	Left, Right	Events	% Gated	% Total	Mean	Geo Mean	CV	Median	Peak Ch
All	1, 9910	7580	100.00	100.00	3.36	2.99	154.89	2.92	1
M1	9, 9910	82	1.08	1.08	20.01	12.85	229.04	10.09	8



File: VG0306.002
Gate: No Gate
Total Events: 10000

Acquisition Date: 06-Mar-03
Gated Events: 10000
X Parameter: FL1-H FL1-Height-GFP (Log)

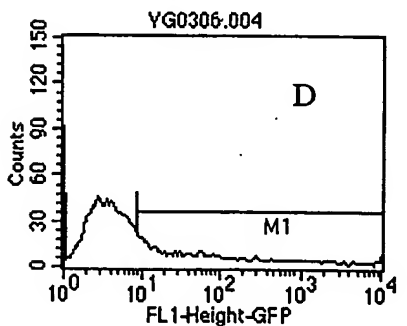
Marker	Left, Right	Events	% Gated	% Total	Mean	Geo Mean	CV	Median	Peak Ch
All	1, 9910	10000	100.00	100.00	544.17	18.67	284.72	6.10	1
M1	9, 9910	4079	40.79	40.79	1328.43	217.61	165.73	254.83	8



File: VG0306.003
Gate: No Gate
Total Events: 10000

Acquisition Date: 06-Mar-03
Gated Events: 10000
X Parameter: FL1-H FL1-Height-GFP (Log)

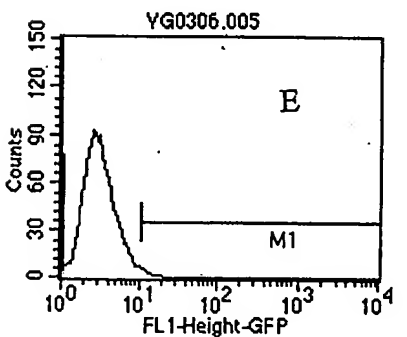
Marker	Left, Right	Events	% Gated	% Total	Mean	Geo Mean	CV	Median	Peak Ch
All	1, 9910	10000	100.00	100.00	1614.60	62.96	194.05	18.27	9910
M1	9, 9910	6569	65.69	65.69	2455.40	255.51	146.18	161.08	9910



File: VG0306.004
Gate: No Gate
Total Events: 10000

Acquisition Date: 06-Mar-03
Gated Events: 10000
X Parameter: FL1-H FL1-Height-GFP (Log)

Marker	Left, Right	Events	% Gated	% Total	Mean	Geo Mean	CV	Median	Peak Ch
All	1, 9910	10000	100.00	100.00	260.71	11.12	433.05	5.38	1
M1	9, 9910	3665	36.65	36.65	704.84	89.87	252.49	54.74	8



File: VG0306.005
Gate: No Gate
Total Events: 10000

Acquisition Date: 06-Mar-03
Gated Events: 10000
X Parameter: FL1-H FL1-Height-GFP (Log)

Marker	Left, Right	Events	% Gated	% Total	Mean	Geo Mean	CV	Median	Peak Ch
All	1, 9910	10000	100.00	100.00	3.29	2.89	62.01	2.84	1
M1	10, 9910	104	1.04	1.04	13.77	13.04	52.84	12.13	10

Fig. 35